

**IPM CURRICULUM FOR HVAC INSTALLERS**  
**LOW-RISK INTEGRATED PEST MANAGEMENT TRAINING**

William and Jean Currie, International IPM Institute

**INSTRUCTION UNITS IN THIS LESSON PLAN:**

1. The IPM policy, what it does, what not to do, your role in policy implementation, how to activate pest management help, expectations from Pest Management Technicians.
2. Concepts of low-risk IPM: exclusion, sanitation, habitat modification, behavior changes.
3. Apply these concepts to HVAC.
4. Moisture management, condensation.
5. Observation and reporting.

**PERFORMANCE OBJECTIVES:**

Unit #	Objective of Performance	Importance	Learning Difficulty
1	Know policy, understand roles in policy implementation and know how to get low-risk pest management help.	Very Important	Easy
2	Know the basic concepts of low-risk pest management: exclusion, sanitation, habitat modification.	Important	Moderate
3	Exclusion of pests from site – birds, rodents, insects, mold and fungi, screens, sealed joints and air intakes.	Important	Moderate
4	Moisture management – reduce humidity, clean and seal ducting, leaks.	Important	Easy
5	Recognize evidence of pest presence and report it.	Important	Easy

KEY:

IMPORTANCE: Very important, important, not too important

OBJECTIVE OF PERFORMANCE: Must know, be familiar, have knowledge, understand, perform, demonstrate, etc.

LEARNING DIFFICULTY: Difficult, Moderate, Easy, Moderate to Very Difficult

## HVAC INSTALLER LESSON PLAN

PREPARATION DATE: May 9, 2008

PREPARED BY: William E. Currie

UNIT OF INSTRUCTION: Low-risk IPM Policy Implementation

TITLE OF LESSON: Policy, roles and pest management help, HVAC skills, observation and reporting.

INSTRUCTIONAL OBJECTIVE: Understand the IPM policy and basic IPM concepts, and their important role in its implementation.

TIME ALLOTTED FOR LESSON: 3 hours

METHOD OF INSTRUCTION: Lecture, guided discussion, demonstration

INSTRUCTIONAL RESOURCES: Manual, overhead transparencies, slides, demo materials, handouts

A/V EQUIPMENT: Flip chart, PPT, slide projector, overhead projector, screen

GENERAL PLAN OF PRESENTATION: Introductions. Attendees will understand the IPM policy and their roles in implementation, basic concepts of IPM (exclusion, sanitation, habitat modification), how to exclude pests from HVAC equipment, moisture management, recognition and reporting of evidence of pest presence.

INTRODUCTION: Names and roles of instructors, student introductions. Why are we here? Implementation of low-risk pest management policy. Why a policy? What does it do? Understand their role in implementing the low-risk IPM policy.

EXPLANATION/APPLICATION/PRESENTATION:

1. Discuss the low-risk IPM policy and the process of its implementation.
2. Key role HVAC installers have in preventing conditions favorable to pests.
3. Basic concepts of low-risk IPM: exclusion, sanitation, habitat modification.
4. How pests may enter structures via HVAC equipment, ducting and pipe races, and useful preventive measures.
5. The importance of moisture and condensation management, humidity reduction and temperature control in a pest management program.
6. Recognizing evidence of pest presence in areas they work (steam tunnels, boiler rooms, pipe races, A/C ducting and equipment, air intakes) and being able to report.
7. Understand how important their work is.

CONCLUSIONS/SUMMARY: Low-risk pest management requires dedication and may be tedious and time-consuming when performed correctly. A thorough understanding of why such procedures are so important frequently imparts a degree of significance to even the most mundane task. HVAC installation and maintenance have an important role in protecting staff and visitors from health and safety risks from pests that may enter via HVAC equipment and ducting.

## HVAC INSTALLER LESSON PLAN UNIT ONE

**COURSE DESCRIPTION:** Low-Risk Integrated Pest Management Implementation  
**SUBJECT MATTER:** Policy, Roles, How to Activate Pest Management Help  
**UNIT OF INSTRUCTION:** Unit 1: Lecture, PPT or Overhead Transparencies, 30 minutes

### INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Policy, history, implementation	Lecture, PPT, overheads	Easy
2	What's different, IPM definition, do's, precautionary principle, approved product list, notification, posting, emergency approval, training	Lecture, PPT, overheads	Easy
3	Don'ts, only licensed Pest Management Technicians apply pesticides, remove harborage (clutter), no BAN, phase out pesticides over time	Lecture, PPT, overheads	Moderate
4	Roles, sanitation, no food, pest-proof food storage, eliminate clutter, observation and reporting, teach others	Lecture, PPT, overheads	Moderate
5	Reportable conditions, pest sighting, pest evidence, droppings, gnawings, webbing, fecal focal points, scattered trash, etc.	Lecture, PPT, slides, display	Difficult
6	Facilities Manager, point of contact, may examine situation, call to report, information directed to appropriate office	Lecture, PPT, overheads	Easy
7	Expectations, Pest Management Technicians respond, emergencies that day, thorough inspection and monitoring	Lecture, PPT, overheads	Easy
8	Low-risk pesticide application, follow-up, repair structural defects, prevent pest access	Lecture	Easy
9	Basics of IPM: exclusion, sanitation, habitat modification, inspection, monitoring, low-risk pesticides, records	Lecture	Moderate

**INSTRUCTIONAL SEQUENCE:** What comes first, chronological order  
**METHOD OF INSTRUCTION:** Lecture, demonstration, performance, discussion

## HVAC INSTALLER LESSON PLAN UNIT TWO

**COURSE DESCRIPTION:** Low-risk Integrated Pest Management Implementation  
**SUBJECT MATTER:** Basic Low-Risk IPM Concepts: Exclusion, Sanitation, Habitat Modification  
**UNIT OF INSTRUCTION:** Unit 2: Guided Discussion – 30 minutes

### INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Basic concepts of low-risk pest management – exclusion, sanitation, habitat modification.	Guided discussion	Easy
2	Exclusion of pests from structures: air intakes, ducts, equipment, isolate sections of pipe races	Lecture	Easy
3	Sanitation: removal of food and water, clean ducts, etc.	Lecture	Easy
4	Habitat modification: lower humidity, lower temperatures	Lecture	Easy

## HVAC INSTALLER LESSON PLAN UNIT THREE

**COURSE DESCRIPTION:** Low-Risk Integrated Pest Management Implementation  
**SUBJECT MATTER:** Exclusion of Pests from Structures  
**UNIT OF INSTRUCTION:** Unit 3: Lecture, Guided Discussion – 30 minutes

### INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	How do pests get in air intakes, pipe races, supplies, airborne?	PPT, slides, demonstration	Easy
2	How do we keep pests out (animals, cats, birds, rats, mice, insects, mites, fungus, molds)?	Lecture, demonstration	Moderate
3	Exclusion methods: seal joints, screen intakes, seal pipe races, etc.	Guided discussion	Moderate
4	Larger critters are easy – the smaller the organism the more difficult it is to exclude.	Guided discussion	Easy

**INSTRUCTIONAL SEQUENCE:** What comes first, chronological order  
**METHOD OF INSTRUCTION:** Lecture, demonstration, performance, discussion

### HVAC INSTALLER LESSON PLAN UNIT FOUR

**COURSE DESCRIPTION:** Low-risk Integrated Pest Management Implementation  
**SUBJECT MATTER:** Moisture Management: Leaks, Humidity, Condensation, Temperature  
**UNIT OF INSTRUCTION:** Unit 4: Guided Discussion – 30 minutes

**INSTRUCTIONAL PROCEDURE:**

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Pests need adequate moisture – very little for ants, mice, etc.	Lecture	Easy
2	How does moisture get into a structure: leaks, condensation, humidity.	Lecture, Guided discussion	Easy
3	Moisture management: the prevention of pest access to moisture, repair leaks, reduce humidity, insulation for condensation.	Lecture, PPT, slides	Moderate
4	Understand the importance of eliminating moisture in structures.	Guided discussion	Moderate

### HVAC INSTALLER LESSON PLAN UNIT FIVE

**COURSE DESCRIPTION:** Low-risk Integrated Pest Management Implementation  
**SUBJECT MATTER:** Recognize Evidence of Pest Presence and Report  
**UNIT OF INSTRUCTION:** Unit 5: Lecture, Slides, Demonstration – 45 minutes

**INSTRUCTIONAL PROCEDURE:**

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	How to report evidence of pest presence, observation and reporting.	Lecture, guided discussion	Easy
2	Occasional invaders: ants, mice, cockroaches, etc.	Lecture, PPT, slides	Easy

**INSTRUCTIONAL SEQUENCE:** What comes first, chronological order  
**METHOD OF INSTRUCTION:** Lecture, demonstration, performance, discussion